FIG. 1

FIG. 2

Server Functions
    Function *Start_Server*
        Out (**server features, server location**)
    Function *Push_Server_Status*
        If server status change
        Out (**change in status**)

FIG. 3A

Server Directory Interface
    Function *Register_Server*
        In (**server features, server location**)
        Modify directory to include new features
    Function *Update_Register*
        In (**change in status**)
        Modify directory to include status change
    Function *Service_Request*
        In (**Service Request**)
        Execute request as independent operation without any coupling
    Function *Load_Balance*
        In (**Server Directory**)
        If load imbalance condition 1
            update server directory to redistribute load
        If load imbalance condition 2
            change back-up server status to primary server status
        If load imbalance condition 3
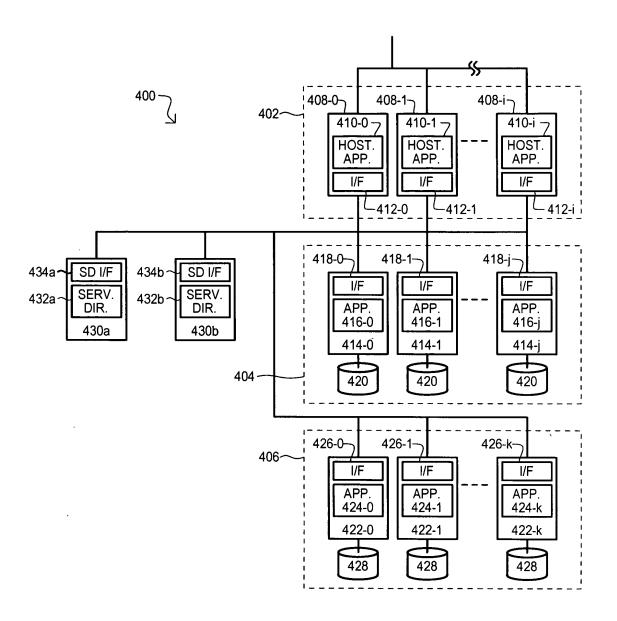   change primary server status to back-up server status
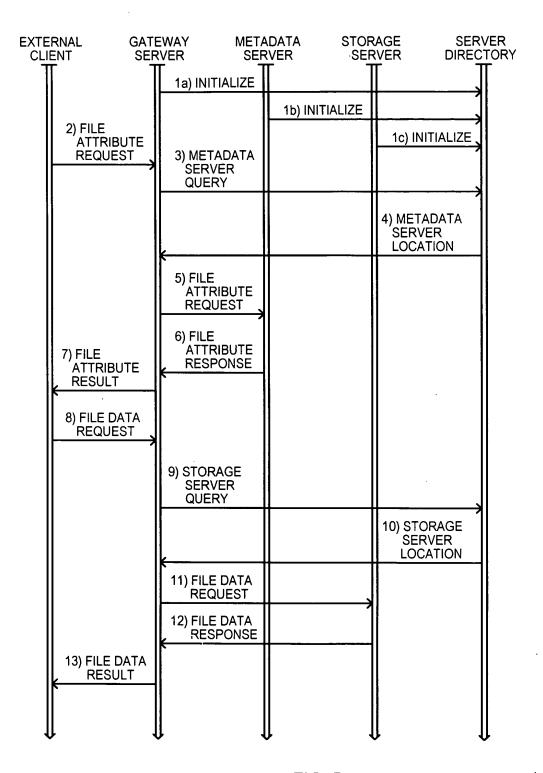
FIG. 3B

FIG. 4

EXTERNAL CLIENT GATEWAY SERVER METADATA SERVER STORAGE SERVER SERVER DIRECTORY

1a) INITIALIZE

1b) INITIALIZE

1c) INITIALIZE

2) FILE ATTRIBUTE REQUEST

3) METADATA SERVER QUERY

4) METADATA SERVER LOCATION

5) FILE ATTRIBUTE REQUEST

6) FILE ATTRIBUTE RESPONSE

7) FILE ATTRIBUTE RESULT

8) FILE DATA REQUEST

9) STORAGE SERVER QUERY

10) STORAGE SERVER LOCATION

11) FILE DATA REQUEST

12) FILE DATA RESPONSE

13) FILE DATA RESULT

FIG. 5

Gateway_Server Functions
    Function *Register_Gateway_Server*
        Out (**hosted application service requirements, gateway server location**)
    Function *Gateway_Server_Status*
        If gateway server resources out of range
        Out (**features that are out of range**)

FIG. 6A

Metadata_Server Functions
    Function *Register_Metadata_Server*
        Server Features = location, metadata range accessed, storage total, storage used
        Out (**Server Features**)
    Function *Metadata_Server_Status*
        If metadata server resources out of range
        Out (**features that are out of range**)

FIG. 6B

Storage_Server Functions
    Function *Register_Storage_Server*
        File Server Features = location, range of files accessed, storage total, storage used
        Out (**Storage Server Features**)
    Function *Storage_Server_Status*
        If storage server values out of range
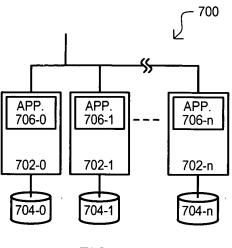   Out (**features that are out of range**)

FIG. 6C

FIG. 7
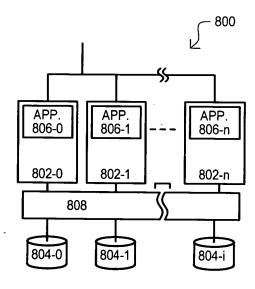

FIG. 8